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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/518,063	03/02/2000	Roozbeh Atarius	040070-990	4673

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EXAMINER

BURD, KEVIN MICHAEL

ART UNIT PAPER NUMBER

2631

DATE MAILED: 07/15/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/518,063

Applicant(s)

ATARIUS ET AL.

Examiner

Kevin M Burd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-16,18-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 8,17,21 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. This office action, in response to the amendment filed 4/21/2004, is a final office action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new grounds of rejection.
3. The objections to the claim and drawings are withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 9-16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchison IV, et al (US 5,790,589) in view of Carlson et al (US 6,366,599).

Regarding claim 1, Hutchison discloses a method of detecting path rays in a multi-path channel (column 1, lines 35-48). Locations are searched to find the location of a signal. The location of the signal is detected (tracked). If a location is not found after a certain time period, a new search is conducted. This information is disclosed in the abstract. Hutchison does not disclose adjusting multiple time references according to

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the determined location of the received path rays. Carlson discloses using a separate clock signal for the purposes of signal acquisition (searching) from the clock signal that is used for sampling and signal tracking (column 5, lines 12-14). Searching takes place and after the signal has been located (according to the determined location), tracking takes place. The switching from one clock to the second clock is the "adjusting at least one of the multiple time references". It would have been obvious for one of ordinary skill in the art at the time of the invention to utilize the teachings of Carlson in the method of Hutchison. Carlson states, "it is advantageous to use two separate clock signals, because the acquisition circuitry can tolerate a significantly higher phase noise in its clock signal than the sampling and tracking stages can" (column 5, lines 9-28).

Regarding claim 2, Hutchison discloses using an expected location of the pilot channel in the PN code sequence to locate the pilot channel. If the signal is not detected, a shift in the location occurs. Each of these spiral shifted locations is analyzed to determine the actual location of the pilot channel. This information is found in the abstract.

Regarding claim 3, Hutchison discloses searching in a search window for a pilot channel and conducting a spiral searching method alternatively search advanced and retard windows positions for a maximum number of iterations (abstract).

Regarding claim 4, the locations are correlated and compared to predetermined thresholds to determine if the window contains a likely candidate (pilot channel) (column 7, lines 10-17).

Regarding claim 5, the locations are correlated and compared to predetermined thresholds to determine if the window contains a likely candidate (pilot channel) (column 7, lines 10-17). This is done for a plurality of iterations until the desired signal is found (column 9, lines 53-58).

Regarding claim 6, Carlson discloses CLK2 is provided for the searching stage and CLK1 is provided for the tracking stage. The stability requirements of the clock signal CLK2 are less stringent than those of clock signal CLK2 (column 5, lines 24-29). The receiver switched from the time reference represented by CLK2 to the more stringent and more accurate clock signal CLK1.

Regarding claim 7, the clocks are switched from CLK2 to CLK1 (column 5, lines 9-29). This switching is the "step of calibrating" since the receiver will be controlled by a different clock signal.

Regarding claim 9, Hutchison discloses this communication takes place in CDMA wireless communication systems.

Regarding claim 10, Hutchison discloses an apparatus for detecting path rays in a multi-path channel (column 1, lines 35-48). Locations are searched to find the location of a signal. The location of the signal is detected (tracked). If a location is not found after a certain time period, a new search is conducted. This information is disclosed in the abstract. Hutchison does not disclose adjusting multiple time references according to the determined location of the received path rays. Carlson discloses using a separate clock signal for the purposes of signal acquisition (searching) from the clock signal that is used for sampling and signal tracking (column 5, lines 12-14). Searching takes place

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and after the signal has been located (according to the determined location), tracking takes place. The switching from one clock to the second clock is the "adjusting at least one of the multiple time references". The two time reference generators are the oscillators that generate the signals CLK2 and CLK1. It would have been obvious for one of ordinary skill in the art at the time of the invention to utilize the teachings of Carlson in the method of Hutchison. Carlson states, "it is advantageous to use two separate clock signals, because the acquisition circuitry can tolerate a significantly higher phase noise in its clock signal than the sampling and tracking stages can" (column 5, lines 9-28).

Regarding claim 11, Hutchison discloses using an expected location of the pilot channel in the PN code sequence to locate the pilot channel. If the signal is not detected, a shift in the location occurs. Each of these spiral shifted locations is analyzed to determine the actual location of the pilot channel. This information is found in the abstract.

Regarding claim 12, Hutchison discloses searching in a search window for a pilot channel and conducting a spiral searching method alternatively search advanced and retard windows positions for a maximum number of iterations (abstract).

Regarding claim 13, the locations are correlated and compared to predetermined thresholds to determine if the window contains a likely candidate (pilot channel) (column 7, lines 10-17).

Regarding claim 14, the locations are correlated and compared to predetermined thresholds to determine if the window contains a likely candidate (pilot channel) (column

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7, lines 10-17). This is done for a plurality of iterations until the desired signal is found (column 9, lines 53-58).

Regarding claim 15, Carlson discloses CLK2 is provided for the searching stage and CLK1 is provided for the tracking stage. The stability requirements of the clock signal CLK2 are less stringent than those of clock signal CLK2 (column 5, lines 24-29). The receiver switched from the time reference represented by CLK2 to the more stringent and more accurate clock signal CLK1.

Regarding claim 16, the clocks are switched from CLK2 to CLK1 (column 5, lines 9-29). This switching is the "step of calibrating" since the receiver will be controlled by a different clock signal.

Regarding claim 18, Hutchison discloses this communication takes place in CDMA wireless communication systems.

Regarding claim 19, as stated above, Hutchison discloses if a location is not found after a certain time period, a new search is conducted.

Regarding claim 20, as stated above Hutchison discloses using an expected location of the pilot channel in the PN code sequence to locate the pilot channel. If the signal is not detected a shift in the location occurs. Each of these spiral shifted locations is analyzed to determine the actual location of the pilot channel. This information is found in the abstract. The adjusted time reference (CLK1) will be used in the tracking stage as stated by Carlson.

Regarding claim 22, as stated above Hutchison discloses using an expected location of the pilot channel in the PN code sequence to locate the pilot channel. If the

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signal is not detected a shift in the location occurs. Each of these spiral shifted locations is analyzed to determine the actual location of the pilot channel. This information is found in the abstract. The adjusted time reference (CLK1) will be used in the tracking stage as stated by Carlson.

Allowable Subject Matter

5. Claims 8, 17, 21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications; please mark "EXPEDITED PROCEDURE" or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Kevin M. Burd
PATENT EXAMINER
7/10/2004